

Non-CO₂ Greenhouse Gases: Methane

Source/Sectors: Wastes/Landfills

Technology: Composting (A.5.1.4)

Description of the Technology:

Landfills are the largest anthropogenic source of methane emissions in the United States. Key reduction options for methane emissions from landfills are reduction of the amount of organics deposited into landfills, and energetic use or flaring of landfill gas (Lucas *et al.*, 2006).

This option involves degradation of organic matter under aerobic conditions. It requires separating organic matter from the waste stream. Finished compost has a market value, used to enhance soil in horticulture/landscape and agricultural sites (USEPA, 2004; IEA, 2003).

Effectiveness: Good

Implementability: Good

Reliability: Good

Maturity: Good

Environmental Benefits: It reduces methane emissions.

Cost Effectiveness:

Technology	Lifetime (yrs)	MP (%)	RE (%)	TA (%)	Capital cost	Annual cost	Benefits
Composting ¹	15	-	100	100	\$359 - \$424	\$81.59 - \$93.25	\$0.00

Note: MP: market penetration; RE: reduction efficiency; TA: technical applicability; costs are in year 2000 US\$/MT_{CO₂-Eq.}

1: IEA (2003) & USEPA (2004)

Industry Acceptance Level: Fair

Limitations: Capital and O&M costs are very high.

Sources of Information:

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